

### **Remarks/Arguments**

In the Office Action dated March 23, 2006, the Examiner: (1) rejected claims 46, 47, 50, 51, 54 and 55 under 35 U.S.C. § 112, second paragraph, as being indefinite; (2) rejected claims 1-3, 5-7, 9-11 and 46-57 as obvious over U.S. Patent No. 6,144,755 ("Niyogi") in view of U.S. Patent No. 5,859,921 ("Suzuki"); and (3) objected to claims 4 and 8 as being dependent upon a rejected based claim, but otherwise allowable.

In this Response, Applicants amend claims 1-11, 47, 51, 55. Applicants also added claims 58-60 and cancelled claims 46, 50, and 54. Claims 11, 47-49, 51-53, and 55-60 are pending. Based on the amendments and arguments presented herein, Applicants respectfully request reconsideration and allowance of the pending claims.

#### **§ 112 REJECTIONS**

The Examiner rejected claims 46, 47, 50, 51, 54 and 55 under 35 U.S.C. § 112, second paragraph as being indefinite. Claims 46, 50, and 54 have been cancelled. Also, claims 47, 51 and 55 have been amended to address the Examiner's rejection. Based on the foregoing, Applicants request that the rejection under § 112, second paragraph, be withdrawn.

#### **§ 103 REJECTIONS**

The Examiner rejected claims 1-3, 5-7, 9-11, and 46-47 as being unpatentable over Niyogi in view of Suzuki. Claim 1 has been amended to more clearly define the distinctions between the present invention and the cited prior art. More particularly, Applicants respectfully submit that amended claim 1 now clearly defines that the present invention processes the digital image of a persons face to compute digital data

representing a rotation of the face in the digital image based on a determined nose axis of face, and to compute digital data representing a tilt of the face in the digital image. Furthermore, amended claim 1 now clearly defines that a quantitative direction of the face in the image is determined based on the data representing the rotation of the face in the image and the data representing the tilt of the face in the image. We respectfully submit that amended claim 1 is patentable over the cited prior art.

The disclosure in Niyogi is clearly limited to finding a stored position that most closely resembles the position in a sample image. More particular, Niyogi discloses using 15 pre-stored potential face directions and identifies the pre-stored face direction that most closely resembles the face direction in the sample image by means of comparison. Significantly, therefore, there is clearly no disclosure at all in Niyogi of processing the sample digital image to compute digital data representing a rotation of the face in the digital image. Similarly, and again significantly, there is clearly no disclosure in Niyogi of processing the sample image to compute digital data representing a tilt of the face in the digital image. Furthermore, and again significantly, in merely identifying one of 15 pre-stored potential face directions that most closely resembles the face direction in the sample image does not constitute disclosure or suggestion of determining a quantitative face direction of the face in the image as defined in amended claim 1. Therefore, Applicants respectfully submit that in addition to the difference admitted by the Examiner (*i.e.*, that Niyogi fails to disclose determining a nose axis of the face in the digital image), Niyogi further fails to disclose or suggest at least the above mentioned features of amended claim 1.

Turning now to Suzuki, Applicants respectfully submit that Suzuki clearly fails to disclose at least the above-mentioned features of amended claim 1. More particularly, there is clearly no disclosure in Suzuki of processing the image of the face to compute digital data representing a rotation of the face in the digital image. Furthermore, there is clearly no disclosure in Suzuki of processing the image of the face to compute digital data representing a tilt of the face in the digital image. Furthermore, there is clearly no disclosure in Suzuki to determine a quantitative face direction of the face in the image.

In contrast to claim 1, Suzuki discloses processing the image of a face to perform eye searching. The apparatus determines the positions of the nares, and uses those positions to define a middle point, which is then used to define left and right rectangular eye searching areas. Alternatively, the apparatus uses blocks around the nares, mouth and eyes to determine a center line. There is no disclosure or suggestion in Suzuki that would lead a person skilled in the art to apply the disclosure in Suzuki (which is concerned with eye searching and actually assumes a symmetrical face that is always looking straight onto the camera) to the disclosure in Niyogi (which is concerned with identifying a pre-stored potential face direction that most closely resembles a face direction in a sample image). Furthermore, even if a person skilled in the art combined the disclosure in Suzuki with the disclosure in Niyogi, Applicants respectfully submit that the combination still would not teach the inventive steps set forth in claim 1. More particularly, neither Niyogi nor Suzuki contain any disclosure or suggestion of at least the above mentioned features of amended claim 1. For at least these reasons, claim 1 and its dependent claims are allowable.

Amended claims 5 and 9 set forth features similar to the features discussed above in relation to amended claim 1. Therefore, Applicants submit that claim 5 and its dependent claims and 9 and its dependent claims are patentable over the cited prior art.

### **CONCLUSIONS**

In the course of the foregoing discussions, Applicants may have at times referred to claim limitations in shorthand fashion, or may have focused on a particular claim element. This discussion should not be interpreted to mean that the other limitations can be ignored or dismissed. The claims must be viewed as a whole, and each limitation of the claims must be considered when determining the patentability of the claims. Moreover, it should be understood that there may be other distinctions between the claims and the prior art which have yet to be raised, but which may be raised in the future.

If any fees or time extensions are inadvertently omitted or if any fees have been overpaid, please appropriately charge or credit those fees to Conley Rose, P.C. Deposit Account Number 03-2769 and enter any time extension(s) necessary to prevent this case from being abandoned.

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Amdt. Dated September 23, 2006  
Reply to Office Action of March 23, 2006

Applicants respectfully request that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

A handwritten signature in cursive script, reading "Alan D. Christenson", written over a horizontal line.

Alan D. Christenson  
PTO Reg. No. 54,036  
CONLEY ROSE, P.C.  
(713) 238-8000 (Phone)  
(713) 238-8008 (Fax)  
AGENT FOR APPLICANTS